

### **SECTION III: REMARKS**

#### **A. Summary of Amendments to the Claims**

By the present amendment, claims 1-9, 12, 14-20, 22, 25, 30, 32, and 35 have been amended, and claims 23 and 36 have been cancelled.

The substantive amendments to independent claims 1 and 22 are supported by the specification, for example, at pages 2-4 and 7, and original claims 8 and 23.

The amendment to claim 8 is supported, for example, at page 3 and at Figure 7.

The amendment to claim 35 is supported by the specification, for example, at Figure 7, as well as at page 9.

Various amendments to claims 1-9, 12, 14-20, 22, 25, 30, and 32 (e.g., removal of the numerical feature identifiers) consist primarily of typographical and formalistic changes.

The foregoing amendments are fully consistent with and supported by the originally-filed specification. No new matter within the meaning of 35 U.S.C. 132 has been introduced by the foregoing amendments.

#### **B. Acknowledgement of Allowable Subject Matter**

Applicant notes that in the June 2, 2009 Office Action, at page 20 thereof, the examiner indicated that claims 18 and 31 “would be allowable if rewritten in independent form, including all of the limitations of the base claim and any intervening claims.”

#### **C. Acknowledgement of Provisional Double Patenting Rejection**

In the June 2, 2009 Office Action at page 2 thereof, claims 1-36 were provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-28 of co-pending U.S. Application No. 10/574,142.

Applicant acknowledges the foregoing provisional nonstatutory double patenting rejection. Upon allowance of the present application or U.S. Application No. 10/574,142, such rejection will be addressed by Application if grounds for a non-provisional double patenting rejection should exist.

**D. Response to Claim Rejections Under 35 U.S.C. 112, First Paragraph**

In the June 2, 2009 Office Action, claims 35 and 36 were rejected under 35 U.S.C. 112, first paragraph, as allegedly failing to comply with the written description requirement. Specifically, the examiner alleged that the “specification does not discuss a computer program product or computer readable medium, nor does it mention an electronic data transmission...”<sup>1</sup> The examiner indicated that the specification should be amended to discuss, *inter alia*, a computer program product or computer readable medium<sup>2</sup>. Claim 36 has been cancelled herewith, thus rendering the rejection of such claim moot. Upon entry of the present amendment, further basis for objection to claim 35 fails to exist, given the amendments to claim 35 and page 9 of the specification..

By the present amendment, claim 35 has been amended to recite, *inter alia*, “[a] computer program product, comprising a storage medium having thereon computer program code ...”<sup>3</sup> Page 9 of the specification has also been amended to state that “... the functions of the intensity compensation device 60 can also be realised as a software implementation, such as in the form of a computer program product including a storage medium having computer program code stored thereon.” Support for the foregoing is found in the specification at page 9, original claims 35-36, and Figure 7, which depicts a schematic block diagram of a display device according to the claimed invention, including a schematic representation of a storage medium<sup>4</sup>. The original specification describes amended claim 35 in sufficient detail that one skilled in the art would conclude

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<sup>1</sup> June 2, 2009 Office Action, pg. 3, lines 12-13.

<sup>2</sup> June 2, 2009 Office Action, pg. 3.

<sup>3</sup> See claim 35.

<sup>4</sup> See Figure 7. Additional support for a storage medium containing computer code is found in the specification at page 9, lines 17-23, which describes an embodiment of the compensation device adapted for implementation as a software module, and use of that module in a computer processor. The examiner’s attention is respectfully directed to the following quotation from M.P.E.P. § 2163 (Guidelines for the Examination of Patent Applications Under the 35 U.S.C. 112, para. 1, “Written Description” Requirement), which states “What is conventional or well known to one of ordinary skill in the art need not be disclosed in detail. See *Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d at 1384, 231 USPQ at 94. >See also *Capon v. Eshhar*, 418 F.3d 1349, 1357, 76 USPQ2d 1078, 1085 (Fed. Cir. 2005)...If a skilled artisan would have understood the inventor to be in possession of the claimed invention at the time of filing, even if every nuance of the claims is not explicitly described in the specification, then the adequate description requirement is met. See, e.g., *Vas-Cath*, 935 F.2d at 1563, 19 USPQ2d at 1116; *Martin v. Johnson*, 454 F.2d 746, 751, 172 USPQ 391, 395 (CCPA 1972) (stating “the description need not be in *ipsis verbis* [i.e., “in the same words”] to be sufficient”).”

that the inventor had possession of the claimed invention at the time of filing of the present application.

Accordingly, withdrawal of the rejection of claim 35 (as amended herewith) under 35 U.S.C. 112, first paragraph, is warranted, and is respectfully requested.

**E. Response to Claim Rejections Under 35 U.S.C. 101**

In the June 2, 2009 Office Action, claims 35 and 36 were rejected under 35 U.S.C. 101 for allegedly being directed to non-statutory subject matter. Claim 36 has been cancelled; accordingly, the rejection of such claim is moot. Applicant traverses the rejection under 35 U.S.C. 101 in application to claim 35 as amended herewith.

Regarding claim 35, the examiner's attention is directed to the following citation from MPEP Section 2106.01, which states, *inter alia*, that:

"a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory," and "a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory."<sup>5</sup> (emphasis added)

Since amended claim 35 recites "[a] computer program product, comprising a storage medium having thereon computer program code adapted, when said computer program code is loaded onto a computer..." (emphasis added), claim 35 is fully compliant with statutory requirements under 35 U.S.C. 101. Accordingly, withdrawal of the rejection of claim 35 is warranted, and is respectfully requested.

**F. Response to Claim Rejections Under 35 U.S.C. 102(b)**

Claims 1-5, 22, 35 and 36 were rejected in the June 2, 2009 Office Action under 35 U.S.C. 102(b) as being allegedly anticipated by U.S. Published Patent Application No.

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<sup>5</sup> See M.P.E.P. Section 2106.01: Computer-Related Nonstatutory Subject Matter; see also *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994).

2001/0028356 to Balogh (hereinafter “Balogh”). Applicant respectfully traverses such rejection in application to the claims as amended herewith.

1. Law Regarding Anticipation

“Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration<sup>6</sup>.” It is not enough that the prior art reference disclose all the claimed elements in isolation. Rather, **“anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim”<sup>7</sup>.**

The standard for anticipation is not satisfied where the prior art reference merely discloses the “concept,” “essence,” “key,” or “gist” of the patented invention, as “concepts do not anticipate<sup>8</sup>.” Anticipation cannot be predicated on teachings in a references that are vague or based on conjecture<sup>9</sup>.

An allegation that a prior art reference anticipates a patent claim cannot be based on sections of a reference taken in isolation; rather **“the cited sections must be read in context”<sup>10</sup>.** This is consistent with the pronouncement of the Federal Circuit that “[t]he well established rule of law is that **each prior art reference must be evaluated as an entirety, and that all of the prior art must be evaluated as a whole”<sup>11</sup>.**

2. The Rejections of Claims 1-5, 22, 35 and 36 Should be Withdrawn Because Balogh Fails to Teach or Disclose All Elements of Such Claims

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<sup>6</sup> *W.L. Gore & Assocs. v. Garlock*, 721 F.2d 1540, 220 USPQ 303, 313 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984).

<sup>7</sup> *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (emphasis added); *see also Glaverbel Societe Anonyme v. Northlake Marketing & Supply Inc.*, 33 USPQ2d 1496, 1498 (Fed. Cir. 1995) (“Anticipation ... requires identity of invention: the claimed invention, as described in appropriately construed claims, must be the same as that of the reference, in order to anticipate.”)

<sup>8</sup> *Panduit Corp. v. Dennison Mfg. Co.*, 774 F.2d 1082, 1101 (Fed. Cir. 1985).

<sup>9</sup> *Datascope Corp. v. SMEC, Inc.*, 776 F.2d 320 (Fed. Cir. 1985).

<sup>10</sup> *In re Chmiel and O’Leary*, 262 F.2d 81, 120 USPQ 188, 190 (C.C.P.A. 1958) (emphasis added).

<sup>11</sup> *Panduit Corp. v. Dennison Mfg. Co.*, 774 F.2d 1082, 227 USPQ 337, 344 (Fed. Cir. 1985) (emphasis added).

Balogh discloses a pixel element useful for displaying three dimensional (3D) images that “comprises means for generating substantially collimated, controllable light beams<sup>12</sup>.” The pixel element disclosed by Balogh comprises “at least one set of substantially point source type, individually addressable light sources...”<sup>13</sup> Balogh further discloses that the “main feature of such a pixel element is the ability to generate several independent light beams within a single unit...without the use of expensive and bulky active optical elements<sup>14</sup>,” and that “the greatest advantage of such a pixel element is the inherent simplicity of the device, which fully substitutes the functions of complicated and sensitive optical arrangements for producing a true 3D image<sup>15</sup>.”

In the Background section thereof, Balogh characterizes Hungarian Patent Application No. T/63503 as producing a 3D image via modulation of a light beam by deflecting a laser beam “toward the different viewing angles within the pixel, with the help of a controllable active optical element positioned in the image pixel<sup>16</sup>.” Balogh’s use of multiple independently controllable light beams is specifically intended to distinguish the foregoing use of active optical elements used to deflect a laser beam supplied to a pixel.

Applicant’s independent claim 1 requires, *inter alia*, “an intensity compensation device for further controlling said light transmission characteristics of pixels within a group to compensate for an angular size of view, of the respective light source, via said pixels.” (Emphasis added.) Applicant’s independent claim 22 also requires, *inter alia*, “processing image data to form pixel intensity data values for each one of a plurality of separately addressable pixels in a display panel,...the pixel intensity data values each for controlling light transmission characteristics of a respective pixel to generate the image.” (Emphasis added.)

Independent claims 1 and 22 of the present application therefore require control of pixels to regulate light transmission therethrough to generate the 3D image, as opposed to (A) control of active optical deflectors to cause selective deflection of a light beam

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<sup>12</sup> Balogh, pg. 1, paragraph 1.

<sup>13</sup> Balogh, pg. 3, paragraph 34.

<sup>14</sup> Balogh, pg. 2, paragraph 20.

<sup>15</sup> Balogh, pg. 3, paragraph 24.

<sup>16</sup> Balogh, pg. 1, paragraph 6.

provided to a pixel (as disclosed in the background section of Balogh), and as further opposed to (B) control of a multiple independent light beams (as disclosed in the detailed description of Balogh). Display devices disclosed by Balogh are not adapted to produce 3D images by use of an intensity compensation device for controlling light transmission characteristics of pixels; rather, Balogh discloses methods that teach away from such modality. As a result, Balogh does not teach or disclose a display device for producing a 3D image or associated method that includes all of the features of independent claims 1 and 22.

For at least the foregoing reasons, independent claims 1 and 22 are patentably distinguished over Balogh. Since dependent claims inherently include the features of the claims on which they depend (see 35 U.S.C. 112, fourth paragraph), the claims depending (whether directly or indirectly) from any of claims 1 and 22 are likewise patentably distinguished over Balogh. Accordingly, withdrawal of the rejections of claims 1-5, 22, and 35 is warranted, and is respectfully requested.

**G. Response to Claim Rejections Under 35 U.S.C. 103**

The June 2, 2009 Office Action contained multiple rejections under 35 U.S.C. 103, namely:

- a rejection of claims 6 and 7 as being unpatentable for obviousness over Balogh in view of U.S. Published Patent No. 2001/0001566 by Moseley et al. (hereinafter, “Moseley”);
- a rejection of claims 8, 12, 13, 19-21, 23, 25, 26, and 32-34 as being unpatentable for obviousness over Balogh in view of U.S. Patent No. 6,386,720 to Mochizuki (hereinafter, “Mochizuki”);
- a rejection of claims 9, 11, and 24 as being unpatentable for obviousness over Balogh in view of U.S. Patent No. 7,113,159 by Sawabe (hereinafter “Sawabe”;
- a rejection of claim 10 as being unpatentable for obviousness over Balogh in view of Sawabe and further in view of Mochizuki; and

- a rejection of claims 14-17 and 27-30 as being unpatentable for obviousness over Balogh in view of U.S. Patent No. 6,172,807 by Akamatsu (hereinafter "Akamatsu."

Such rejections are inapposite to the claims as amended herewith, as detailed below.

Moseley discloses a 3D directional display including a backlight, a spatial light modulator and a parallax barrier in combination with a mask to provide viewing windows that have substantially uniform light intensities<sup>17</sup>. Moseley is specifically cited by the examiner for using a lens or lenticular array to focus the light from a specific light source corresponding to a group of pixels<sup>18</sup>.

Mochizuki discloses a light source device including a plurality of light emitting elements and adjusting means for individually adjusting the luminance of each light emitting element<sup>19</sup>. Mochizuki is specifically cited by the examiner for teaching that the optical characteristic is a light transmission characteristic, and the display driver and the display driver and intensity compensation device are adapted to control the amount of light passing through each pixel according to an image being displayed<sup>20</sup>. Specifically, the examiner cites the following section of Mochizuki, which states:

"The LEDs in a light emitting element group (hereinafter referred to as the 'LED group') comprising the **plurality of LEDs are each driven by exclusive drive sources** (adjusting means), **and each of the drive sources can adjust the luminance of the LED** corresponding thereto. Accordingly, the luminance of each LED can be individually adjusted and therefore, the luminance distribution of a linear light source comprising the LED group can be controlled. The luminance distribution of a surface illuminant can also be controlled when the beam of light from the LED group is caused to enter the interior of the acrylic plate from the end surface of the acrylic plate and make the surface of the acrylic plate shine to thereby provide a surface illuminant<sup>21</sup>."

As stated in the foregoing excerpt, Mochizuki discloses control of LED emitters to modulate the intensity of light output, and does not disclose control of pixels (e.g.,

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<sup>17</sup> Moseley, Abstract.

<sup>18</sup> See Office Action, pgs. 7-8.

<sup>19</sup> Mochizuki, Abstract.

<sup>20</sup> See Office Action, pg. 8.

<sup>21</sup> Mochizuki, col. 3, ll. 25-37.

separate from an associated backlight) to regulate light transmission therethrough to generate a 3D image.

Sawabe discloses a liquid crystal display device that is adapted to adjust gradation curve distortion with respect to the viewing angle to freely switch the screen display from a wide angle viewing angle to a narrow viewing angle<sup>22</sup>. Sawabe is cited by the examiner as teaching an intensity compensation device that includes a lookup table containing image correction values that are applied to correct the luminosity of the pixels of the display<sup>23</sup>.

Akamatsu discloses a display device for providing a stereoscopic image that includes a light source with selectively variable light-emitting regions and control means for controlling the light source so the brightness of the light emitting regions increases in order to obtain a uniform viewing luminance<sup>24</sup>.

It has been previously demonstrated herein that Balogh fails to disclose all elements of Applicant's independent claims 1 and 22 as amended herewith. None of Moseley, Mochizuki, Sawabe, and Akamatsu remedy the above-identified deficiency of Balogh in teaching all element of Applicant's independent claims – that is, the failure of Balogh to teach or suggest control of pixels to regulate light transmission through pixels to generate a 3D image. Since dependent claims inherently include the features of the claims on which they depend (see 35 U.S.C. 112, fourth paragraph), the claims depending (whether directly or indirectly) from any of claims 1 and 22 are likewise patentably distinguished over any hypothetical combination of Balogh, Moseley, Mochizuki, Sawabe, and Akamatsu. Accordingly, withdrawal of all claim rejections under 35 U.S.C. 103 is warranted, and is respectfully requested.

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<sup>22</sup> Sawabe, col. 5, ll. 21-28.

<sup>23</sup> See Office Action, pg. 14.

<sup>24</sup> Akamatsu, Abstract, col. 5, ll. 42-52.



**CONCLUSION**

In light of the foregoing, Applicants respectfully submit that all of the now-pending claims are in condition for allowance. Examination of the enclosed claims and issuance of a notice of allowance are earnestly solicited. Should any issues remain that may be amenable to telephonic resolution, the examiner is invited to telephone the undersigned attorneys to resolve such issues as expeditiously as possible.

In the event there are any errors with respect to the fees for this response or any other papers related to this response, the Director is hereby given permission to charge any shortages and credit any overcharges of any fees required for this submission to Deposit Account No. 14-1270.

Respectfully submitted,

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